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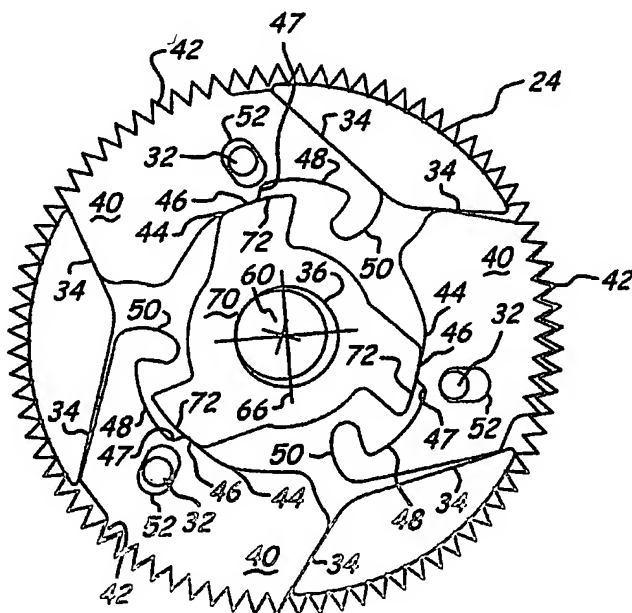
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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: RECLINER ASSEMBLY FOR AN AUTOMOTIVE VEHICLE SEAT HAVING A FLOATING CAM



(57) **Abstract:** A recliner assembly is disclosed
for providing selective pivotal adjustment of a
seat back (14) relative to a seat cushion (12).
The recliner assembly includes a fixed plate (30)
fixedly secured to the seat cushion and a mobile
plate (30) fixedly secured to the seat back. The
mobile plate is fixedly secured to the fixed plate.
The mobile plate includes an annular rim having
a plurality of teeth (62). A pawl is slidably
supported between the fixed and mobile plates
for movement in and out of locking engagement
with the plurality of teeth. A cam (70) is fixedly
secured to a shaft (60) rotatably journaled through
an aperture (36) formed in the mobile plate. The
aperture is oversized relative to the shaft to allow
the shaft and the cam to float radially relative to
the pawl to help prevent binding of the pawl during
movement in and out of locking engagement with
the plurality of teeth.

INTERNATIONAL SEARCH REPORT

International Application No
P 2004/002244

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B60N2/235

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B60N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 024 410 A (YOSHIDA TOMONORI) 15 February 2000 (2000-02-15)	1,2,4, 11-22, 24,27-29 3,5-7
Y	column 7, line 36 - line 49; figures 1,2	
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A	column 5, line 8 - line 18; figure 4	1
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	column 3, line 49 - line 58; figure 5	
	----- -/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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G document member of the same patent family

Date of the actual completion of the international search

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International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 622 407 A (YAMADA YUKIFUMI ET AL) 22 April 1997 (1997-04-22) column 3, line 8 - line 14; figure 3	1,20,29
X	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 08, 29 September 1995 (1995-09-29) & JP 7 136032 A (AISIN SEIKI CO LTD), 30 May 1995 (1995-05-30) abstract	1,20,29
A	EP 1 195 115 A (NHK SPRING CO LTD) 10 April 2002 (2002-04-10) figure 16	1,3,20, 29

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/002244

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-19

Recliner assembly with self-adjusting rack of teeth

2. claims: 20-28

Recliner assembly including a cam with axially extending pin

3. claim: 29

Reclined assembly with a fixed plate including wedge surfaces

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/002244

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